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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
NORTON, JENNIFER L

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/711,089	TRAN, NHAN	
	Examiner	Art Unit	
	Jennifer L. Norton	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 August 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8/20/2004
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-5 are pending.

Oath/Declaration

2. The oath is objected to because of the following informality:

The full name of each inventor (family name and at least one given name together with any initial) has not been set forth. The signature on the electronic oath/declaration filed on August 20, 2004 is improper. An electronic signature should have the inventor's full name, including middle initial if applicable, inserted between two single forward slashes.

Ex. /John T. Smith/

A submission of a new oath is required.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "1-11" has been used to designate different components/elements in Figs. 2A, 2B, 3, 5A, 5B, 7 and 8. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 1-2 and 4-5 are objected to because of the following informalities:

Claims 1-2 and 4-5 reference figure numbers (i.e. "see Fig. #") and the Detailed Description ("clarified in the Detailed Description"). References to figures and to the Detailed Description are improper and all references should be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 recites the limitations "the number of occupants" (lines 4), "the process" (lines 4-5), "the room" (line 6), "the two different directions" (lines 9-10), "the embedded program" (lines 19-20), "the scale value" (line 22), "the system" (lines 23-24 and 24-25), "the relay" (lines 27) and "the electrical load" (lines 27). There is insufficient antecedent basis for these limitations in the claim.

7. Claim 2 recites the limitations "the detection angle" (line 6), "the right side or left side" (line 11), "the entrance of " (lines 11-12). There is insufficient antecedent basis for this limitation in the claim.

8. Claim 3 recites the limitations "said embedded program" (lines 2-3), "the Up/Down Counter button" (lines 4-5 and 20-21), "the OnOff/Sleep button" (lines 9-10, 15-16, 25-26 and 27-28), "the noise immunity" (line 19) and "the light demanding level" (lines 24-25). There is insufficient antecedent basis for this limitation in the claim.

9. Claim 4 recites the limitations "the amplified signal" (line 6) and "the signal" (lines 7-8). There is insufficient antecedent basis for this limitation in the claim.

10. Claim 5 recites the limitation "the control algorithm" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,374,854 (hereinafter Chen) in view of U.S. Patent No. 6,255,946 (hereinafter Kim).

13. As per claim 1, Chen teach a smart switch called Occupant Counter Control Switch, or OCCS, automatically turning on and off electrical appliances displaying the by intelligently keeping track of and number of occupants in a room via the process of counting up or counting down when detecting a person entering or leaving the room respectively, the said OCCS comprises of:

a Vision-Restricted PIR Motion Detector (col. 2, lines 18-21 and Fig. 1, element 1) for generating two distinctive signals that correspond to the two different directions of a person entering or exiting the room (col. 2, lines 21-30 and col. 4, lines 34-36 and 41-44);

a photo sensor (Fig. 1, element 5) for detecting ambient light (col.2, lines 50-53);

two soft touch push buttons (Fig .1, element 71, 72, and 73) for manually controlling the relay, driving the electrical load, and for serving other functions (col. 2, lines 58-67 and col. 3, lines 1-2);

an amplifier circuit with band-pass filter (Fig. 1, element 2) for filtering 60 to 120 Hz noises and amplifying the signal of the said PIR sensor (col. 2, lines 21-25);

a delicate and complicated program (Fig. 7) embedded in a microprocessor IC chip as a central processing of all inputs and outputs of the said smart switch (col. 3, lines 3-9).

Chen does not expressly teach does a removable dome shape clear plastic or Fresnel lens protecting the said Vision-Restricted PIR Motion Dectector from accidentally getting contacted and changed its pre-aimed direction and a digital display controlled by the embedded program that sequentially and rapidly flashes each segment at a time for displaying the figure of the count value that indicating number of occupants in the room, or displaying the scale value of tuning processes, or displaying a letter "L" indicating the system is in sleep mode, or a letter "A" indicating the system is in adjusting mode.

Kim teaches to a removable dome shape clear plastic or Fresnel lens protecting the said Vision-Restricted PIR Motion Dectector from accidentally getting contacted and changed its pre-aimed direction (col. 4, lines 49-54) and a digital display (Fig. 2, element 58) controlled by the embedded program that sequentially and rapidly flashes each segment at a time for displaying the figure of the count value that indicating number of occupants in the room (col. 5, lines 10-21).

Therefore, it would be obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Chen to include a removable dome shape clear plastic or Fresnel lens and a digital display to facilitate the monitoring of objects passing through room (col. 2, lines 49-53).

14. As per claim 5, Chen discloses the embedded program dwells in the said microprocessor (Fig. 1, element 4) as a central processing unit is based on the control algorithm (col. 3, lines 3-9 and Fig. 7).

15. As per claim 4, Chen and Kim teach to all the components of claim 4, but do not expressly teach to the layout of interconnection between each component, which is not significant to the patentability of the claimed invention.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of ~~Chen~~ Kim in further view of U.S. Patent Publication No. 2003/0227391 (hereinafter Beasley).

AU 3/20/04

17. As per claim 2, Chen does not expressly disclose the OCCS or smart switch wherein said the Vision-Restricted PIR Motion Detector is further comprises of:

a cylinder tube encapsulates a dual-element PIR sensor to form a vision-restricted sensor for narrowing the detection angle of the said PIR sensor;

a pivot-joint supporter allows the said Vision-Restricted PIR Motion Detector to be adjusted to point at any direction so that the OCCS can be mounted at the right side or left side of the entrance of the room or can be aimed down to detect children.

Beasley teaches to cylinder tubes for encapsulating a PIR sensor (pg. 2, par. [0038] and a telescopically mounting assembly (pg. 2, par. [0039] and pg. 3, par. [0045]).

Therefore, it would be obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Chen to include a cylindrical tube and pivot-joint supporter to provide wider motion detection (pg. 2, par. [0037]).

18. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Chen in view of Kim in further view of Patent No. 5,903,217 (hereinafter Stanczak).

19. As per claim 3, Chen does not expressly teach the two push buttons controlled by the said embedded program make up nine combinational function keys:

an adjusting count up key when the Up/Down Counter button is pressed and held in longer than half of a second,

an adjusting count down key when the Up/Down Counter button is pressed and held in shorter than half of a second,

a manually toggling on key to close the said relay to turn on the lights when the Onoff/sleep button is pressed and held in less than half of a second while the lights have been off,

a manually toggling off key to open the said relay to turn off the lights when the Onoff/sleep button is pressed of a second while the lights have been on,

an activating sleep mode key when the OnOff/sleep button is pressed and held in longer than half of a second, when the two buttons are pressed and then released together the first time allowing accessing to other four remaining function keys,

typically the key to increase the noise immunity of and held in less than half the said PIR signal when the Up/Down Counter button is pressed and held in more than half of a second,

the key to decrease the noise immunity of the said PIR signal when the Up/Down Counter button is pressed and held in less than half of a second,

the key to raise the light demanding and held in level when the Onoff/sleep button is pressed longer than half of a second,

the key to lower the light demanding level when the OnOff/sleep button is pressed and held in shorter than half of a second, finally the two buttons are pressed and released together the second time, or no further pressing on any button for one minute, the adjusting mode is terminated and the system resumes its normal operation.

Stanczak teaches to a microprocessor that can be programmed using manually DIP switches to perform a variety of functions (col. 7, lines 10-16).

Therefore, it would be obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Kim to include combinational keys for controlling options associated a microprocessor (col. 7, lines 16-19).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to motion sensors.

U.S. Patent No. 5,621,662 discloses a home automation system with a security system.

U.S. Patent Publication No. 2005/0043907 discloses a multifunction sensor device that provides various transducer functions.

U.S. Patent Publication No. 2005/0128067 discloses a motion sensor or detector in a security system is adjusted by a remotely transmitted signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is 571-272-3694. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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